1: Nat Biotechnol 1998 Jan;16(1):40-4 Related Articles, Cited in PMC, Cited in Books, Books, LinkOut

DNA chips: state-of-the art.

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The technology and applications of microarrays of immobilized DNA or oligonucleotides are reviewed. DNA arrays are fabricated by high-speed robotics on glass or nylon substrates, for which labeled probes are used to determine complementary binding allowing massively parallel gene expression and gene discovery studies. Oligonucleotide microarrays are fabricated either by in situ light-directed combinational synthesis or by conventional synthesis followed by immobilization on glass substrates. Sample DNA is amplified by the polymerase chain reaction (PCR), and a fluorescent label is inserted and hybridized to the microarray. This technology has been successfully applied to the simultaneous expression of many thousands of genes and to large-scale gene discovery, as well as polymorphism screening and mapping of genomic DNA clones.

Publication Types:
- Review
- Review, Tutorial

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